

REMARKS/ARGUMENTS

Applicant thanks the Examiner for the very thorough consideration given the present application.

Claims 1-12 are now present in this application. Claims 1, 2 and 7 are independent. Claims 1, 2, 7 and 9-12 have been amended. Reconsideration of this application, as amended, is respectfully requested.

Reasons for Entry of Amendments

At the outset, it is respectfully requested that this Amendment be entered into the Official File in view of the fact that the amendments to the claims automatically place the application in condition for allowance.

In the alternative, if the Examiner does not agree that this application is in condition for allowance, it is respectfully requested that this Amendment be entered for the purpose of appeal. This Amendment reduces the issues on appeal by placing the claims in compliance with 35 U.S.C. § 112, first paragraph. This Amendment was not presented at an earlier date in view of the fact that Applicant did not fully appreciate the Examiner's position until the Final Office Action was reviewed.

Examiner Interview

Applicant wishes to thank the Examiner for the courtesies extended to Applicant's representative, Carl T. Thomsen, Registration No. 50,786, during the interview which was conducted on April 29, 2005. During the interview, claim

changes were discussed in an attempt to place the claims in compliance with 35 U.S.C. 112, first paragraph. In line with the discussions during the interview, independent claims 1, 2, and 7 have been amended to provide further clarity regarding the claimed elements and method steps, and are now believed to place the application into condition for allowance. Accordingly, reconsideration and allowance of the present application are respectfully requested.

Priority Documents

A certified copy of the priority document was submitted in parent application 09/618,447 on July 18, 2000, and therefore, it is not necessary to file an additional certified copy with the present application. (See MPEP § 201.146). It is respectfully requested that the Examiner acknowledge receipt of the priority document in the next official communication.

First Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 1-6 and 10-11 stand rejected under 35 U.S.C. § 112, first paragraph asserting that “first pixels for a left-eye picture and second pixels for a right-eye picture” were not described in the specification.

In response to the Examiner’s rejection, Applicant has amended independent claim 1 to recite a combination of method steps including *inter alia*

aligning a display unit with a variable color barrier, the display unit having first pixels and second pixels displaying mixed image signals, each of the first and second pixels having at least one sub-pixel cell used for creating a

left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture.

In addition, Applicant has amended independent claim 2 to recite a combination of elements including *inter alia*

a display device having first pixels and second pixels for displaying the mixed image signals received from the image signal converter, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture.

Support for the above features can be found, for example, in paragraph [0059] of the original specification, which explicitly discloses, *inter alia*, "...the display unit 54 includes red, green, and blue sub-pixel cells". See also FIGS. 6, 10, 12, and 13, which show the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture.

The Applicant respectfully submits that each of independent claims 1 and 2, as amended herein, is properly supported by the disclosure in the specification.

Thus, the Applicant respectfully submits that the first rejection under 35 U.S.C. § 112, first paragraph has been overcome. Reconsideration and withdrawal of this rejection are thus respectfully requested.

Second Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 1-12 stand rejected under 35 U.S.C. § 112, first paragraph, as not enabling.

In response to the Examiner's rejection, the Applicant has amended independent claim 1 to recite a combination of method steps, including *inter alia*

aligning a display unit with a variable color barrier, the display unit having first pixels and second pixels displaying mixed image signals, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture,

whereby the observer recognizes a stereoscopic picture formed of the separate left-eye picture and the right-eye picture when the first and second voltages are applied to the first and second variable filters, and the observer recognizes a plane picture when the third voltage is applied to the first and second variable filters.

In addition, the Applicant has amended independent claim 2 to recite a combination of elements, including *inter alia*

a display device having first pixels and second pixels for displaying the mixed image signals received from the image signal converter, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye

picture and at least one other sub-pixel cell used for creating a right-eye picture,

whereby an observer recognizes a stereoscopic picture formed of the separate left-eye picture and the right-eye picture when the first and second voltages are applied to the first and second variable filters, and the observer recognizes a plane picture when the third voltage is applied to the first and second variable filters.

Support for the above features can be found, for example, in paragraphs [0059] and [0066] of the original specification.

See also FIGS. 6 and 10, each of which show “the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture”, and FIGS. 6, 8A, 8B, and 10 which show “the observer recognizes a stereoscopic picture formed of the separate left-eye picture and the right-eye picture when the first and second voltages are applied to the first and second variable filters, and the observer recognizes a plane picture when the third voltage is applied to the first and second variable filters”.

In addition, the Applicant has amended independent claim 7 to recite a combination of elements, including *inter alia*

a display device having first and second pixels for displaying the mixed image signals received from the image signal converter, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye

picture and at least one other sub-pixel cell used for creating a right-eye picture,

wherein the light scattering device transmits an incident light as it is in a separated state in response to a first voltage, thereby creating a stereoscopic picture formed of the separate left-eye picture and the right-eye picture to be observed when the light scattering device is in a stereoscopic mode, and

wherein the light scattering device scatters said incident light in response to a second voltage other than said first voltage, thereby creating a plane picture to be observed when the light scattering device is in a plane mode.

Support for the above features can be found, for example, in paragraphs [0059], [0085], and [0098] of the original specification.

See also FIGS. 12 and 13, each of which show “the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture”, and “the light scattering device transmits an incident light as it is in a separated state in response to a first voltage, thereby creating a stereoscopic picture formed of the separate left-eye picture and the right-eye picture to be observed when the light scattering device is in a stereoscopic mode, and the light scattering device scatters said incident light in response to a second voltage other than said first voltage, thereby creating a plane picture to be observed when the light scattering device is in a plane mode”.

The Applicant respectfully submits that each of independent claims 1, 2, and 7, as amended herein, is enabling.

Thus, the second rejection under 35 U.S.C. § 112, first paragraph has been overcome. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Claim Objections

Claims 1, 7-9, and 12 are objected-to because of informalities. In response, the Applicant has amended claims 1 and 7 to correct each of the issues pointed out by the Examiner. Accordingly, reconsideration and withdrawal of the objections are respectfully requested. The Examiner will note also that the Applicant has voluntarily amended claims 9-12 in order to place these claims in better form.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,751,479 to Hamagishi et al. This rejection is respectfully traversed.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Amendments to Independent Claims 1, 2, and 7

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the instant application, the Applicant

respectfully submits that independent claim 1 has been amended to recite a combination of steps, including *inter alia*

aligning a display unit with a variable color barrier, the display unit having first pixels and second pixels displaying mixed image signals, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture,

whereby the observer recognizes a stereoscopic picture formed of the separate left-eye picture and the right-eye picture when the first and second voltages are applied to the first and second variable filters, and the observer recognizes a plane picture when the third voltage is applied to the first and second variable filters.

In addition, the Applicant respectfully submits that independent claim 2 has been amended to recite a combination of elements in a multi-mode stereoscopic image displaying apparatus, including *inter alia*

a display device having first pixels and second pixels for displaying the mixed image signals received from the image signal converter, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture,

whereby an observer recognizes a stereoscopic picture formed of the separate left-eye picture and the right-eye picture when the first and second

voltages are applied to the first and second variable filters, and the observer recognizes a plane picture when the third voltage is applied to the first and second variable filters.

Further, independent claim 7 has been amended to recite a combination of elements directed to a multi-mode stereoscopic image apparatus, including *inter alia*

a display device having first and second pixels for displaying the mixed image signals received from the image signal converter, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture,

wherein the light scattering device transmits an incident light as it is in a separated state in response to a first voltage, thereby creating a stereoscopic picture formed of the separate left-eye picture and the right-eye picture to be observed when the light scattering device is in a stereoscopic mode, and

wherein the light scattering device scatters said incident light in response to a second voltage other than said first voltage, thereby creating a plane picture to be observed when the light scattering device is in a plane mode.

The Examiner states that Hamagishi et al. teach a three-dimensional display that is capable of being switched between stereoscopic mode and 2D display mode, wherein the apparatus is comprised of a liquid crystal display device. According to the Examiner, Hamagishi et al. teach that when the

polymer dispersed liquid crystal panel is switched to ON, the color filter with the panel is switched to stereoscopic mode for directing and separating the image displayed on the liquid crystal display in such a way that the left eye image reaches the left eye of an observer and the right eye image reaches the right eye of the observer to create stereoscopic image display.

However, Hamagishi et al. do not teach or suggest the step of aligning a display unit with a variable color barrier, the display unit having first pixels and second pixels displaying mixed image signals, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture,

whereby the observer recognizes a stereoscopic picture formed of the separate left-eye picture and the right-eye picture when the first and second voltages are applied to the first and second variable filters, and the observer recognizes a plane picture when the third voltage is applied to the first and second variable filters (as set forth in claim 1); or

a display device having first pixels and second pixels for displaying the mixed image signals received from the image signal converter, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture, whereby an observer recognizes a stereoscopic picture formed of the separate left-eye picture and the right-eye picture when the first and second voltages are applied to the first and second variable filters, and the observer

recognizes a plane picture when the third voltage is applied to the first and second variable filters (as set forth in claim 2); or

a display device having first and second pixels for displaying the mixed image signals received from the image signal converter, each of the first and second pixels having at least one sub-pixel cell used for creating a left-eye picture and at least one other sub-pixel cell used for creating a right-eye picture,

wherein the light scattering device transmits an incident light as it is in a separated state in response to a first voltage, thereby creating a stereoscopic picture formed of the separate left-eye picture and the right-eye picture to be observed when the light scattering device is in a stereoscopic mode, and

wherein the light scattering device scatters said incident light in response to a second voltage other than said first voltage, thereby creating a plane picture to be observed when the light scattering device is in a plane mode (as set forth in claim 7).

It appears to the Applicant that Hamagishi et al. merely teach a liquid crystal panel 17 that becomes translucent when a power source is turned on, and serves as an expansion sheet when the power source is turned off. The Office Action equates the turning on and off of the power source with first and second voltages.

In the view of the Applicant, these alleged first and second voltages are not applied to first and second variable filters of a variable color barrier unit.

In other words, a voltage is applied to only one (not two) alleged filter. Further, the on/off voltages are not simultaneously applied. Still further, it is the Applicant's view that no color filter of Hamagishi et al. is variable.

Applicant respectfully submits that the combination of steps/elements as set forth in each of independent claims 1, 2, and 7 is not disclosed or made obvious by the prior art of record, including Hamagishi et al.

Reconsideration and withdrawal of this of rejection are thus respectfully requested.

The Examiner will note that claims 9-12 have been amended merely to correct minor informalities.

All claims of the present application are now in condition for allowance.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to

telephone Carl T. Thomsen, Reg. No. 50,786, at (703) 205-8034, in the Washington, D.C. area.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), the Applicant respectfully petitions for a one (1) month extension of time for filing a response in connection with the present application and the required fee of \$120 is being filed concurrently herewith.

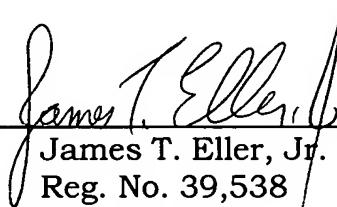
Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.


Respectfully submitted,

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